

which is beyond their comprehension. Undoubtedly, for a thorough training in electrical engineering the practical and theoretical sides of the subject must receive equal attention, but not all students can attend institutions where this is to be obtained. Many have of necessity to be satisfied with some sort of compromise, and one welcomes a book which is sound in its treatment and is admirably calculated to give such students the knowledge and information they most require.

Selection of some sort, when dealing with so large a subject, is of course necessary; the author has, we think, made a wise choice in the branches with which he deals and in the manner in which he treats them. These include, in addition to the general principles underlying the subject, batteries, accumulators, measuring instruments and supply meters, arc and incandescent lamps, and the continuous-current dynamo and motor. Particular apparatus is only described when it illustrates the general principles. Perhaps in a few instances there is a little too much detail, as, for example, in the description of the recording mechanisms used in meters. We would gladly see some of this matter omitted, and such branches as telegraphy, telephony and electro-chemistry treated on broad lines instead. Mr. Sewell has the power of clear exposition, and has succeeded well in avoiding too mathematical treatment; the illustrations and diagrams are excellent. M. S.

The Force of Mind: or, the Mental Factor in Medicine. By A. T. Schofield, M.D., M.R.C.S., &c. Pp. xiv + 309. (London: J. and A. Churchill, 1902.) Price 5s. net.

IN this book, which is written for medical practitioners, Dr. Schofield appeals for a fuller recognition of the influence of the "mind" in causing and in curing disease of the body, and urges medical men to work for the reclamation of those waste and unmapped regions in which the religious fanatic and the quack doctor have hitherto been allowed to reign, occasionally producing, among much that is harmful, remarkable cures. He would have the subject taught and studied in the hospitals and great medical schools as a part of the regular curriculum of every medical student. There can be no doubt that the reforms advocated are much needed and that Dr. Schofield performs a useful service in thus pointing out the weak and neglected side of modern medicine. The author supports his contentions with many quotations from high authorities, both ancient and modern, and by the citation of numerous cases, and gives from his own experience many practical hints that should be valuable to practitioners. From the point of view of the psychologist, the book is vitiated throughout by the insistence upon the part supposed to be played by "the unconscious mind." This seems to be a figment similar in function to von Hartmann's "unconscious," i.e. it is a hypothetical agent to the activity of which is assigned all that is obscure and difficult of explanation in the workings of the nervous system. It is a radically vicious hypothesis because it is one that tends to baffle rather than to quicken the impulse to research. We are told that the phrase is not used merely to cover the more complex workings of the nervous system that are not accompanied by consciousness, and no reasons are assigned for rejecting this, which may now be called the generally accepted and intelligible view of the matter. The author seeks to support his position by quoting Dr. Bastian's plea, "Let us make mind include all unconscious nerve actions," and in so doing reveals the dire confusion of his own thoughts on this subject. He good-naturedly pokes fun at those who objectify "Nature" as a healing agent and then commits the same error, replacing "Nature" by the *vis medicatrix naturae*, which he identifies with the unconscious mind, and thus commits himself to the somewhat absurd dogma

that such remedial processes as compensatory hypertrophy of the heart and phagocytosis are manifestations of the power of "the unconscious mind." Unless it can be shown, as at present it cannot be, that nervous activities and conscious processes together are inadequate to the explanation of all the facts of our mental life, the assumption of a third mysterious agent, call it "the unconscious mind" or "subconsciousness" or what you will, is much to be deprecated. W. McD.

Introductory Chemistry for Intermediate Schools. By Lionel M. Jones, B.Sc., A.R.C.Sc.(Lond.) Pp. vii + 195. (London: Macmillan and Co., Ltd.) Price 2s.

THE standard of this book is suitable for the junior classes of intermediate and secondary schools in which chemistry is used as a form subject, and the matter in it covers almost the same ground as that in the chemical part of Perkin and Lean's "Introduction to Chemistry and Physics." The treatment is rather different, as the historical side is not mentioned. The students are expected to have been taken through some course in physics or experimental science before they begin this course. It is important that they should have done so, as they are supposed to understand the balance, to weigh to milligrammes and to know the meaning of many physical terms.

The book opens with chapters on the description of bodies. Much attention should be given to this, as in a recent examination, when a fragment of Iceland spar was given for description, only a very small percentage of candidates recognised that definite shape was characteristic of the substance. Then follow chapters on simple operations, solution, evaporation, distillation. Afterwards come chapters on rusting, combustion, oxygen, hydrogen, chalk, coal and coal-gas, salt and salt-gas, and finally on acids and bases.

Some of the methods appear to us to be too elaborate for young children. There is, for instance, the complicated aspirator, which experience has taught the present writer is hardly ever clearly grasped. The correction for pressure is always a difficult point. Again, the students should never be allowed to make statements such as "1 litre of hydrogen weighs 0.09 gm." or "density of chalk-gas 0.00198 gm. per c.c." without stating definitely the temperature and pressure at which the weight or density has been ascertained.

We should have liked to have seen more attention given to the indestructibility and conservation of matter. This principle of chemistry cannot be grasped too early. Many of the elementary experiments are conducted with its tacit assumption, and we think it should be pointed out to the student. S. S.

Next to the Ground; Chronicles of a Country Side. By Martha McCulloch Williams. Pp. xii + 386. (London: Heinemann, 1902.)

IN this dainty little volume, the author affords English readers a most interesting series of glimpses of the charms and passing events of everyday country life in the United States, after the fashion which so many writers have made familiar in England. A close observer of nature, and evidently imbued with the spirit that everything has an interest of its own, if looked at in the proper light, the author has hit upon a congenial subject, and treated it in a manner which affords an excellent example of the best style of "nature-teaching." The scene is laid in a southern county lying to the westward of the Alleghanies and eastward of the Mississippi, nearly midway between the mountains and the river; and whether describing ploughing with mules or oxen, discoursing of the quail, the partridge or the opossum, discussing shooting and fox-hunting or writing on horses, cows and pigs, the author is equally at home and equally interesting. Some of the information given, such

as the fact that the Derby is a race for three-year-olds (p. 255) and that female foxes are properly called vixens (p. 305) is perhaps somewhat superfluous, for English readers at any rate; and we rather fail to see why pigs are called cousins of opossums (p. 149).

To the naturalist, the most interesting chapters are those on wasps and ants, the "possum," quail and partridge, and insects generally, the account of the habits of the opossum being especially good. In the chapter on fox-hunting, the author confirms the statement of other writers that the so-called red fox (the American representative of the European species) cannot be run down without a relay of dogs, or, as we should say, hounds. Whether, however, this is due to the greater speed of American foxes or the inferior pace of American hounds remains to be told. In teaching people how much is to be learnt from the intelligent observation of ordinary surroundings, the book before us is clearly a step in the right direction.

R. L.

L'Age de la Pierre. By G. Rivière. "Bibliothèque d'Histoire et de Géographie universelles." Pp. 183. (Paris: Schleicher Frères.) Price 2 francs.

IN this book we have a popular account of the Stone age following the traditional lines of French archæology. The author does not pay much attention to any discoveries out of France, but the French evidence being so complete this does not matter very much, especially as the book is not intended for students. The transition between the Palæolithic and Neolithic ages is recognised, and the author brings out clearly the culture of the immigrant Neolithic brachycephals. The statement on p. 136 that "certain peoples of Oceania still use very similar sticks [to the curved throw-stick of Egypt] which they call boomerang" is inexcusably vague. A description of megalithic monuments closes the account of the Neolithic age. The last chapter deals briefly with trepanation as a surgical method in Neolithic times. The author still employs the absurd term "bâtons de commandement" for the carved perforated antlers found in the caves; surely he must have known of the conclusive paper read by O. Schoetensack before the Congrès International d'Anthropologie et d'Archéologie at Paris in 1900, in which the author demonstrated their similarity to the bone dress fasteners of the Eskimo. In addition to twenty-six figures in the text, there are four half-tone plates, three from the paintings of Jamin and one from Cormon, which illustrate in a dramatic manner various incidents in the life of the men of the Stone age.

Flora of the Liverpool District. By C. T. Green. Pp. xii + 207. (Liverpool: D. Marples and Co., 1902.) Price 5s. net.

THE present work replaces a previous "Flora of Liverpool," which was originally published in 1872 and to which, later on, appendices were added. The revision of previous records and the compilation of recent data have been undertaken by members of the Liverpool Naturalists' Field Club, under the direction of Dr. Green. An original feature of the book consists of illustrations specially drawn by Miss E. M. Wood. These are for the most part characteristic and lifelike, and the figures of certain less common species such as *Ranunculus Lenormandi*, *Viola carpatica*, *Juncus supinus* and others are very useful, but in many instances the important features of the plant are omitted, or at any rate not emphasised, e.g. the root of *Lathyrus macrorrhizus*. In the case of localities where plants are now extinct, as, for instance, Oxtun Heath, it would have been well to notify this more definitely. It will be observed that comparatively recent strangers are being admitted, notably *Lycium barbarum*, while *Solanum rostratum* represents a quite modern American invasion. The geological chapter does not serve to dispel the impression

that the book is too much of a dry catalogue, and even the submerged forest at Leasowe receives but a brief mention.

Examples in Algebra. By C. O. Tuckey, B.A. Pp. viii + 178. (London: Bell and Sons.)

IN making this collection, Mr. Tuckey has kept in mind the recommendations of the committee on the teaching of mathematics appointed by the Mathematical Association, and the result is seen in various welcome innovations. Thus, for instance, exercises on the use of graphs are given, some at quite an early stage; there are problems to show the application of algebra to geometry, mensuration and elementary physics, and so on. Checks on accuracy are frequently suggested, and there are numerous questions to be answered orally. Particularly good sets of questions are those on "Formulæ" (p. 23) and "On the Use of Theory of Form as Check" (p. 93). Merely artificial conundrums are happily rare; the worst we have

noticed is "Simplify $\sum_{abc} \frac{1}{1 + x^a - b + x^a - c}$." Undoubtedly

this is a very good collection, which may be recommended without reservation.

Children's Gardens. By the Hon. Mrs. Evelyn Cecil (Alicia Amherst). Pp. xv + 212; with illustrations (London: Macmillan and Co., Ltd., 1902.) Price 6s.

THE object of this daintily produced volume, with its profusion of beautiful illustrations, is to teach children enough about gardening to enable them to find pleasure and profit in the study and cultivation of plants. The book is written in a simple, practical way, and should be of real assistance to those who are able to indulge their taste for horticulture without too much attention to expense. Judging from the style of the book, we should say that the author will succeed in winning and retaining the interest of young children, who will, by the way, find occupation for the winter months as well as for the brighter seasons of the year. Directions are given as to how to utilise the leisure hours of winter in reading about the plants, in manufacturing garden seats and so on, for use in the garden during the days of summer. Altogether a pretty gift book.

School of the Woods: some Life Studies of Animal Instincts and Animal Training. By William J. Long. Illustrated by Charles Copeland. Pp. xiii + 364. (Boston, U.S.A., and London: Ginn and Co., 1902.) Price 7s. 6d.

MR. LONG believes that an animal's success or failure in the ceaseless struggle for life depends, not upon instinct, but upon the kind of training which the animal receives from its mother. He has written most of the sketches contained in this attractive volume in the woods, with the subjects themselves living just outside his tent door. The result is that we are provided with an interesting book which will go a long way to make all who read it lovers of nature and sympathetic, intelligent observers of animal life. Mr. Copeland's excellent pictures will help very much to make the book a favourite with children.

Macmillan's Short Geography of the World. A New Handbook for Teachers and Students. By George F. Bosworth. Pp. vi + 197; with maps. (London: Macmillan and Co., Ltd., 1902.) Price 1s. 6d.

THIS little book deals in a brief manner with the chief facts in the physical and political geography of the countries of the world. Numerous clear maps will enable the beginner to find many of the places mentioned in the text without the aid of a separate atlas. There is scarcely enough information about the many subjects included in the book to make the geography lesson interesting to children, but as a summary the book may be useful